

## **Chapter 6**

### **Hydropower Water Rights and Basin Water Use**

Pursuant to HB 397, the Clark Fork River Basin Task Force must identify options to protect the security of water rights and provide for the orderly development and conservation of water in the future. These three tasks are addressed individually in chapters 7, 8, and 9, respectively. This chapter explores a critical issue potentially affecting present and future water use in the entire basin. As noted in chapter 3, the hydropower water rights for the Noxon Rapids Dam located at the bottom of the Montana portion of the Clark Fork River basin near the Idaho border may pose a limitation on the water available for future use in the basin. Avista's water rights, which total 50,000 cfs, are sufficient to utilize almost all of the flows leaving the basin. Clark Fork River flows greater than 50,000 cfs occur only 6-8% of the time over the entire 90 year period of record. Flows greater than 50,000 cfs generally occur 22 days in May and June of wetter years. This suggests that surface water (and groundwater connected to surface water) is legally available for future appropriation in the basin only during the period when Avista's water rights are filled. Also, all water rights junior to Avista's rights and the hydropower rights at two PPL Montana dams at Kerr and Thompson Falls appear to be at risk much of the time.

Before accepting these two suggestions as conclusions, the Task Force examined the basin's hydrology and the status of Avista's and PPL Montana's hydropower water rights and their legal implications. As explained below, the Task Force concluded that Avista's and PPL Montana's water rights likely do pose a constraint on future basin water development and a risk to water use based on water rights junior to the hydropower rights. Given this fact, the Task Force identified potential strategies to allow both future basin water development and use by junior rights holders.

#### **Avista Water Rights**

Avista installed turbines at the Noxon Rapids Dam in 1951, 1959, and 1976. The hydropower water rights associated with the turbines are:

- \$ 1951 - 35,000 cfs with a priority date of February 20, 1951;
- \$ 1959 - 5,400 cfs with a priority date of April 3, 1959; and
- \$ 1976 - 15,000 cfs with a priority date of November 19, 1974.

The 1951 and 1959 rights were confirmed in an August 27, 1986, decree issued by Montana Water Judge Holter. The 1986 decree is subject to an additional objection period before the issuance of a final decree by the Montana Water Court. Avista obtained the 1976 rights through the Montana Water Use Act water right permitting process and the associated public notice and administrative review. About 30% of the water rights by number in the basin are junior to Avista's 1976 rights.

#### **PPL Montana Water Rights**

Kerr Dam - PPL Montana owns two water rights for the production of hydroelectricity at Kerr Dam. One right is for the amount of water necessary to fill the storage reservoir at any time. The second right is based on the capacity of the turbines and is for 14,540 cfs for power generation. The priority date for both water rights is April 3, 1920. These rights have not yet been adjudicated by the Montana Water Court. According to flow records, PPL Montana's rights at Kerr are filled only during the high-flow periods of high spring runoff. In 5 of 30 years, the Kerr rights are not filled at any time. In 11 of 30 years, the Kerr rights are filled 32 days or less. On average, the Kerr rights are filled only 56 days per year.

Thompson Falls Dam - PPL Montana owns eight water rights for the production of hydroelectricity at Thompson Falls Dam. Three of the rights, 76N-W-094415-00, 76N-W-211941-00, and 76N-W-211942-00, are for storage and can be used to draft and refill the reservoir for the purpose of providing daily shaping of power in response to demand.

The remaining five water rights are for flows through the turbines. Those rights are:

| Water Right #   | Flow Rate  | Priority Date    |
|-----------------|------------|------------------|
| 76N-W-094414-00 | 1,250 cfs  | March 31, 1905   |
| 76N-W-211938-00 | 2,000 cfs  | January 29, 1906 |
| 76N-W-211939-00 | 5,000 cfs  | December 3, 1906 |
| 76N-W-211940-00 | 2,870 cfs  | June 29, 1909    |
| 76N-P-081517-00 | 12,300 cfs | May 13, 1992     |

The 1905, 1906, and 1909 rights were confirmed by an order issued by Judge Holter on October 20, 1986. A permit for the 1992 right was issued pursuant to the Montana Water Use Act.

According to flow records, prior to 1972, PPL Montana's water rights at Thompson Falls were generally satisfied throughout most of the irrigation season except during portions of August and September. Based on the 21-year period from 1971 through 1991, PPL Montana's water rights at Thompson Falls were filled 294 days per year. After 1992, PPL Montana's rights have been satisfied only during the high flow periods of spring runoff. From 1993 through 2000, on average, PPL Montana's rights at Thompson Falls were filled 93 days per year.

### **River Flow and the Avista Water Rights**

The Task Force examined Clark Fork river flows over various averaging periods before and after Avista completed Noxon Rapids Dam. The analysis, which is included in Appendix 4, compared flows averaged over annual, monthly, and hourly periods for the most recent 10 years of record and for two 45-year periods (from 1911-1955 and 1956-2000) for three locations upstream of the dam. The analysis found that over all three averaging periods, the flows for the most recent 10 years of record and for the 45 years from 1956-2000 were higher than occurred in 1911-1955, the 45 years representing the approximate period prior to the Noxon Rapids Dam. Some Task Force participants concluded from this analysis that the flow data do not show any evidence that the water supply for the Noxon Rapids Dam has been or is being negatively impacted by water development in the basin. Another daily analysis, also included in Appendix 4, reached a different conclusion, namely, that during some months daily average flows have decreased over the last 45 years.

### **Legal Significance of the Hydropower Water Rights for Present and Future Basin Water Use**

Given the analysis just described, the Task Force consulted with Tim Hall, chief legal counsel for the Montana Department of Natural Resources and Conservation (DNRC), concerning the implications of hydropower water rights. Under the prior appropriation doctrine that governs water rights in Montana, a water rights holder, including a utility holding hydropower water rights, has the right to make a call on a junior user to cease using water whenever its senior water right is unfilled. Because Montana has a unitary water rights system, the call can be made on both surface and groundwater. Junior water rights holders have the opportunity to argue that the call would be futile because the actual incremental flow increase at the turbines would be insignificant. The counsel advised, however, that as long as Avista or PPL Montana can show on a "calculation" basis that the water

used by a junior would increase flow at its hydropower turbines, a call is likely to be upheld by a judge. In the counsel's opinion, except during periods when Avista's or PPL Montana's rights are filled, it is unlikely that surface water and possibly groundwater connected to surface water is legally available in the basin for future appropriation, but applicants have the right to try to prove that it is.

Specifically, with respect to Avista's and PPL Montana's water rights, this may mean:

- Except during periods of high spring runoff (57 days per year on average), water is not likely to be available for appropriation in the Flathead River basin above Kerr Dam, and any appropriation with a priority date junior to April 3, 1920, is potentially subject to a call by PPL Montana.
- Except during periods of high spring runoff (93 days per year on average), water is not likely to be available for appropriation in the Clark Fork River basin above Thompson Falls Dam, and any appropriation with a priority date junior to May 13, 1992, is potentially subject to a call by PPL Montana.
- Except during the 22 days during May and June in 3 years out of 10, water is not likely to be available for appropriation in the Clark Fork River basin, and any appropriation with a priority date junior to November 19, 1974, is potentially subject to a call by Avista.

It is important to note, however, that neither Avista nor PPL Montana has exercised their right to make a call on a junior water rights holder to cease using water, and until June 2004, neither had objected to a new water right permit application. In June 2004, Avista for the first time objected to an application for a new surface water right permit. No one can predict with certainty whether or when the utilities might choose to make a call or object to a new water right permit. As the adjudication is completed and all of the water rights in the Clark Fork basin are tied together in one water right decree, the process of making a call will be made easier.

### **Strategies to Allow Additional Basin Water Development and to Protect Junior Users**

Assuming that the basin's hydropower rights present a real constraint on the issuance of new water rights and on junior water users, several options exist that could provide for future water use and protect the junior uses. The Task Force identified the following options and discussed their advantages and disadvantages.

**Challenge the Hydropower Water Rights** - Some water users may believe that the hydropower water rights were issued in error. As noted above, the hydropower rights at the Noxon Rapids Dam and at Thompson Falls Dam have been confirmed by District Court Judge Holter, whereas the Kerr Dam rights have not yet been adjudicated. Because the final water right decree for the Clark Fork River basin has not yet been issued by the Water Court, opportunity still exists to object to all of these rights. While no one can predict with certainty how the Water Court will rule, it does not appear likely that the hydropower rights will be determined to be invalid.

**Water Marketing** - If no more new water rights are available in the basin, water could be re-allocated by individuals or political subdivisions purchasing and converting existing water rights to new uses or by leasing existing water rights. Even if new water rights are available, water right purchases and/or leases may occur because any new economic activity dependent on water use probably could not be based on the basin's most junior water right. The risk that such a junior right would be interrupted would be high. An advantage of water marketing is that it is a well understood activity. Disadvantages include the possible unavailability of water rights for purchase or lease

and/or the price that would be necessary to do so. Also, some water rights, such as irrigation rights that might be available for purchase or lease, would not provide the year-round water use that some users require. Modifying an existing right by changing the location of the diversion and/or type or place of use would also require obtaining authorization from DNRC. As discussed in Chapter 4, obtaining a change associated with a water right purchase or lease would require a showing that existing rights holders would not be adversely affected.

**Basin Closure** - Over-appropriated basins can be closed to the issuance of new water rights. The advantage of a closure is that it would eliminate the need for existing water rights holders, including hydropower right holders, to object to new water rights permits or to enforce the priority of their rights against new junior users. To obtain water for new uses, water users would have to rely on water marketing, contracting for stored water, or condemning existing rights. Another disadvantage of basin closure is that it would not provide protection for existing water users with rights junior to the hydropower rights from water rights calls.

**Condemnation of Existing Rights** - Municipalities may condemn existing water rights for public purposes. Condemnation would result in the payment of fair market value for any rights condemned. The state might also provide the condemnation opportunity if the state had condemnation authority. This authority has not been established. The advantage of condemnation is that it affords the opportunity for additional water use if the water marketing, USBR contracting, and other options fail. The disadvantage is that condemnation is by definition an unwilling transaction involving litigation. Also, condemnation would not expand the amount of water available for use—the conditions of the water right condemned, including the rate and volume, would remain unchanged.

**Subordination of Hydropower Rights** - As discussed in Chapter 4, water rights are presently allocated strictly on a first in time, first in right basis. No beneficial use has a higher priority than any other. The state could move away from this allocation and require hydropower rights to be subordinated to other water users and thereby eliminate the opportunity for hydropower water right holders both to make call on junior users and to object to new water right permits. The Montana Legislature required a subordination of the hydropower rights at the Cabinet Gorge Dam when it was built. However, because the hydropower rights at Noxon Rapids Dam, which is located immediately upstream of the Cabinet Gorge Dam, were not subordinated, the Cabinet Gorge subordination had no practical effect on Montana water users in the Clark Fork River basin. In addition to changing the way water has been allocated, a subordination of hydropower rights at other basin hydrogenerating facilities may require payment by the state to the utilities for the subordinated rights, probably through a condemnation action.

**Store More Peak Runoff In the Ground** - During periods when the hydropower water rights are filled, water could be stored in the ground for later use. An advantage of such storage is that it is much cheaper than new dams. A potential disadvantage is that the state currently lacks the legal ability to regulate groundwater storage, and, depending on the location, also lacks the necessary information to actively manage groundwater.

**Contracting for Water from Hungry Horse Reservoir** - Hungry Horse Reservoir was constructed and is operated by USBR “(f)or the purpose of irrigation and reclamation of arid lands, for controlling flood, improving navigation, regulating the flow of the South Fork of the Flathead River, for the generation of electric energy and for other beneficial uses primarily in the State of Montana,

but also for downstream uses.” Under certain circumstances, public entities such as irrigation districts and state and local governments and individuals can contract for water stored in the reservoir. In its water rights claim filed with the Montana Water Court, USBR claimed 3,500,000 acre-feet of storage for future sales, although no such contracts have been issued to date. According to USBR, the steps necessary to enter into contracts include:

- Public participation in negotiations and decision-making;
- Addressing the environmental aspects in compliance with the National Environmental Policy Act of 1969;
- Identifying the available water supply;
- Performing a financial analysis of the water users’ ability to pay for irrigation water; and
- Determining the irrigation water charge (this includes the water users’ repayment ability and an allocation to irrigators of an appropriate portion of the project construction costs).

The operation of Hungry Horse Reservoir is subject to a biological opinion issued by the National Marine Fisheries Service as a result of the listing of Columbia basin anadromous fish stocks pursuant to the Endangered Species Act. This may mean that the top 20 feet of reservoir storage is allocated to anadromous fish. The fish constraint may limit the availability of water for contracts for consumptive uses.

While Montana has not been active in seeking contracts for use of Hungry Horse water, other states have been seeking large additional blocks of water from the Columbia River for future appropriations. The State of Washington is proposing to conduct rule-making to establish a new water management program for the Columbia River that defines how the Department of Ecology (DOE) will carry out its dual obligations to allocate water and preserve a healthy environment. As a part of this initiative, DOE sought scientific advice about the relative effects of off-stream uses in comparison to existing hydropower and fisheries uses of the river. In a recent report to DOE entitled *Managing the Columbia River: Instream Flows, Water Withdrawals, and Salmon Survival*, the National Research Council of the National Academy of Sciences examined the cumulative effects and the risks to the survival of fish species listed under the Endangered Species Act of potential future water withdrawals from the Columbia River of between approximately 250,000 acre-feet and 1,300,000 acre-feet per year. The State of Washington has pending water withdrawal permit applications with a total volume in this range. The report conclusions on the following topics included:

- Salmon and Environmental Parameters - “Within the body of scientific literature reviewed as part of this study, the relative importance of various environmental variables on smolt survival is not clearly established. When river flows become critically low or water temperatures excessively high, however, pronounced changes in salmon migratory behavior and lower survival rates are expected.”
- Prospective Additional Water Withdrawals - “Decisions regarding the issue of additional water withdrawal permits are matters of public policy, but if additional permits are issued, they should include specific conditions that allow withdrawals to be discontinued during critical periods. Allowing for additional withdrawals during the critical periods of high demand, low flows, and comparatively high water temperatures identified in this report would increase risks of survivability to listed salmon stocks and would reduce management flexibility during these periods.”
- Water Management Institutions - “The State of Washington and other basin jurisdictions should convene a joint forum for documenting and discussing the environmental and other consequences of proposed water diversions that exceed a specified threshold.”
- Better Management of Existing Water Supplies - “The State of Washington and other Columbia

River basin entities should continue to explore prospects for water transfers and other market-based programs as alternatives to additional withdrawals.”

Two options may exist by which Montana water users and political subdivisions including the state might contract for water purchases from Hungry Horse Reservoir. The first is a temporary water service contract similar to contracts issued by USBR with individuals and political subdivisions for water from the Missouri River stored in Canyon Ferry Reservoir. These contracts must be negotiated annually.

The Task Force utility representatives propose that any new water right permit issued by DNRC in the Clark Fork basin be conditioned with the requirement that the permittee purchase a temporary service contract from USBR every year to supplement stream flow in either the Flathead or the Clark Fork rivers when the flow would fall below the hydropower water rights. Thus, a new appropriator above Kerr Dam would have to enter into a temporary service contract with USBR to prevent water use under the permit from causing the Kerr Dam water right not to be filled. Existing water right holders above Kerr Dam junior to PPL Montana’s hydropower rights at Kerr could purchase a similar temporary water service contract to prevent the junior use from impacting PPL Montana’s Kerr water right. The temporary water service contracts for both new and junior users above Thompson Falls and Noxon Rapids dams could function in the same way to protect the hydropower rights at these facilities. These contracts would have the advantage of allowing new water uses and eliminating water rights calls by the utilities. Another advantage of contracts for stored water is that the contract water can be allocated by a water commissioner regardless of whether an enforceable water right decree exists. The disadvantages might be the availability and costs of the contracts to the new and junior rights holders, plus the need to negotiate the contracts every year.

The second contracting option is a long-term contract. Long-term contracts would provide the advantages just described. The contract water would allow new water uses and could protect uses based on water rights with priority dates junior to the hydropower rights from calls by the utilities. Unlike the temporary service contracts, annual negotiation would not be required. The disadvantages of these contracts again include the water costs and availability. According to USBR, long-term contracts can be signed only by political subdivisions with taxing authority, such as state and local governments or irrigation districts.

### **Task Force Recommendation**

The State of Montana should open discussions with USBR to determine the availability and cost of temporary and long-term contracting options and to determine a quantity of firm storage available from Hungry Horse Reservoir for Montana uses other than hydropower.